

## THE EFFECT OF USING GAMIFICATION IN ENGLISH LEARNING AT SMA NEGERI 5 TAKALAR

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Article Info	Abstract
<p>Received: July 5, 2023 Revised: August 15, 2023 Accepted: September 25, 2023 Published: June 30, 2025</p> <p><b>Keywords:</b> Gamification Reading Comprehension A Quasi-experimental Method</p>	<p>This study investigates the effectiveness of the Gamification strategy in enhancing reading comprehension among Grade 11 students at SMA Negeri 5 Takalar. As innovative, student-centered approaches become increasingly urgent in modern education, this research offers empirical insight into the application of gamification in language learning. A quasi-experimental quantitative design was employed, involving 30 purposively selected students. Data were collected through pre- and post-tests administered to both experimental and control groups. Results show a substantial improvement in the experimental group's reading scores (from 50.53 to 89.20), compared to the control group (from 48.53 to 64.93). Statistical analysis revealed a significant difference (<math>p = 0.000 &lt; 0.05</math>), and the effect size of 2.3 indicates a strong impact. These findings demonstrate that the Gamification strategy significantly improves reading comprehension and contributes to the development of engaging, effective English learning practices in secondary education.</p>
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## INTRODUCTION

English has become one of the core subjects at the secondary school level in Indonesia. However, in a developing country like Indonesia, we still regard English as a foreign language. The existence of an understanding of English as a foreign language requires students to communicate with others in the learning process. For communication to be clear and understandable, students must master four aspects of language skills, namely reading, listening, writing, and speaking Kustanti and Prihmayadi, (2017).

Language is a common tool among people in a community. With language, we are able to deliver arguments and information to others. Language has an crucial role in life allows people to connect one character to any other, certainly one of which is through reading. Reading is an activity wherein someone gained information from reading and places it in

written shape. From a reading perspective, it is an activity to get information that requires focus or high concentration on reading. Sari, Akbarjono, Martina, (2022). In addition, Reading is the process performed and used by readers to find information using the author's words and written language.

Reading is likewise necessary to understand the answers to certain questions or issues that someone has read. Reading is not properly taught as part of the scientific method Haque, (2006). Teachers additionally lack the crucial training for that. Learning in the 21st century focuses on thinking, problem-solving, and communication skills to make learning fun B. Anwar & Asriani, (2017) in Gelen Assoc, (2018). Junedi et al., (2020) there are numerous ways to solve the problem that explains this and one way is to use suitable strategies so that the learning process becomes effective in teaching reading.

The strategy itself should be adapted to the conditions and the abilities of the students due to the fact each class has its conditions, which additionally determines the appropriate strategy for the class itself. An alternative strategy that teachers can use when teaching reading comprehension is gamification in learning. Deterding et al. (2011) define gamification as the incorporation of game design material into non-game environments. Bozkurt & Genç-Kumtepe, (2014) describe gamification as an implementation of a game philosophy that motivates individuals and changes processes in ways that are interesting to participants. Gökkaya, (2014) defines gamification as an educational platform aimed at internalizing an individual's extrinsic motivation and reward along with evaluation. The focus of gamification in this situation is the user or student. The game mechanism in gamification ensures that millennial students experience pleasure Schnepp, (2014).

Based on observations, the researcher concluded that the students did not master English vocabulary enough, and when students read, they still had difficulty determining the Main Idea. This problem not only comes from the students themselves but also comes from how the teacher delivers the material. From observations made by researchers, teachers have never implemented gamification learning in teaching English, especially in reading comprehension which makes students less motivated and feel less interested in learning English.

Based on the above results, researchers believe gamification strategy in learning is the best way to apply in improving students' reading comprehension. This strategy is not only an innovation in the teaching and learning process, but also suitable for helping students who complain of boredom and sleepiness. Researchers also argue that by using monotonous learning strategy, any material to be studied is not absorbed nicely.

Based on this background, the researcher is interested in researching the title "The Effect of Using Gamification in English Learning". This is experimental research on Class XI Students of SMA Negeri 5 Takalar. In this case, most of the students feel bored and less motivated to learn English because the English teacher has not used gamification in the learning process. There are several game variations of the gamification learning strategy. In this study, the researcher uses a type of game, namely Quizizz. In standard game rules, some questions are shown to students using a projector which students answer on their own

devices. The reason researchers chose this application is to increase students' motivation and interest in reading comprehension. Quizizz is used via a mobile phone or computers that are operated using the internet network. Researchers use the gamification learning strategy so that students can be more motivated, active, confident, and more likely to understand the English learning process well especially in reading comprehension. This strategy is applied to class XI students of SMA Negeri 5 Takalar.

## LITERATURE REVIEW

This section presents a review of related studies that examine the effect of gamification on English learning. In this case, Sari, Akbarjono, & Martina, (2022) investigated the effect of gamification in learning on students' reading comprehension in students. In the data collection process, the researcher conducted a pre-test and post-test for 4 meetings. The results of this study indicate that the application of Gamification in Learning Methods has a significant influence on students.

Kotob & Ibrahim, (2019) tested the effect of applying a gamification strategy on students' motivation and achievement in learning Arabic. This study used a pretest and posttest approach with eleven students in an Arabic class. Questionnaires to assess the motivation for implementing pretest and posttest strategies, as well as written and oral exams to assess student achievement. The results showed that gamification by implementing elements (points, challenges, rewards, and leaderboards) showed an increase in student motivation and achievement.

Laksanasut & Seubsang, (2021) learned English in class before and after the gamified learning intervention. Researchers used a pretest and posttest control group design to collect data. Participants were divided into two groups to test the effect of the intervention. Group A received the gamified learning intervention, while Group B received the gamified learning intervention. B learned English in class using a traditional teaching approach. This finding revealed that students in Group A showed a higher level of learning motivation than students in Group B.

Ali Abusa & Ahmad Baniabdelrahman, (2020) The results showed that there was a statistically significant difference between the mean scores of the experimental and control group students on the post-test of overall reading comprehension and at each level of reading comprehension (literal, inferential, and critical levels) because the learning program from gamification. Thus, it can be concluded that the performance of students in the experimental group outperformed students in the control group in the reading comprehension post-test at three levels of reading comprehension. This result means that gamification is more effective than conventional teaching.

## METHODS

This research is quantitative research with quasi-experimental with a non-equivalent control group design. This is a research study that involves two groups: an experimental

group and a control group. The experimental group was taught by applying Gamification (Quizizz), while the control group with conventional method.

Furthermore, the researcher conducted a pre-test, treatment, post-test. Both classes' either pre-test and post-test data were compared and calculated to determine whether the Gamification (Quizizz) affects students' Reading Comprehension.

### **Instrument**

The researcher collected the data by test as the research instrument. In collecting the data, the researcher used the instrument to obtain the necessary data. The test is the instrument used for this research. The test is divided into two test: pre-test given before the treatment, and post-test given after the treatment.

### **Data Analysis**

The technique of data analysis that used in this research are ANOVA test and Nonparametric Test. According to Konsultan Data Penelitian & ArcGIS, (2020), the ANOVA is a test of the hypothesis that is used in parametric statistics, This test became performed at the interaction of factors by comparing the averages of two or more samples. According to Ohlyver, (2018), the nonparametric test is a distribution-free for statistical test. This term states that in data used in nonparametric there is no need to follow a certain distribution. The steps for calculating and evaluating the findings are as follows:

#### **1. Descriptive Analysis**

Descriptive analysis is a statistical method aimed at providing an explanation or description of a research topic based on variable data obtained from a specific group of subjects Khasanah, (2021).

#### **2. Normality Test**

The normality test was used to determine whether the sample under study is normally distributed or not. Normality test is carried out with reference to the rules:

- a. The data are not distributed normally if the p-value is lower than 0.05 (sig. <0.05).
- b. The data is distributed normally if the p-value is higher than 0.05 (sig. > 0.05).

#### **3. Paired Sample T-Test**

The paired sample t-test is used to assess whether there would be a significant difference between the control group and the experimental group. The test is also used to determine whether or not the effect of using Gamification (Quizizz) improves students' Reading Comprehension.

#### **4. Homogeneity Test**

The homogeneity test shows whether the X and Y variable data are homogeneous or not. The value of sig. of the homogeneity test will be determined by reference to:

- a. It is said that the variants of two or more groups of the data population are not the same if the p-value is lower than 0.05 (sig. <0.05)

- b. It is said that the variants of two or more groups of data population are the same if the p-value is higher than 0.05 (sig. >0.05).

#### 5. Hypothesis Testing

The purpose of the hypothesis test is to decide whether the hypothesis being tested is rejected or accepted. Basis for decision making:

- a.  $H_a$  : if the p-value < sig a = 0.05%, there is a significant effect of using Gamification (Quizizz) on students' Reading Comprehension in English Learning. The null hypothesis ( $H_0$ ) is rejected, whereas the alternative hypothesis ( $H_a$ ) is accepted.
- b.  $H_0$  : if the p-value > sig a = 0.05%, there is no significant effect of using Gamification (Quizizz) on students' Reading Comprehension in English Learning. This means the null hypothesis ( $H_0$ ) is accepted and the alternative hypothesis ( $H_a$ ) is rejected.

#### 6. Effect size formulation

This stage is completed to determine the study's level of importance and the extent to which the data has an impact.

### RESULT AND DISCUSSION

**Table 1 Descriptive Statistics of Pre-Test and Post-Test**

	N	Minimum	Maximum	Mean	Std. Deviation
Pre-Test Experimental Class	30	20	88	50.53	20.274
Post-Test Experimental Class	30	80	100	89.20	5.768
Valid N (listwise)	30				

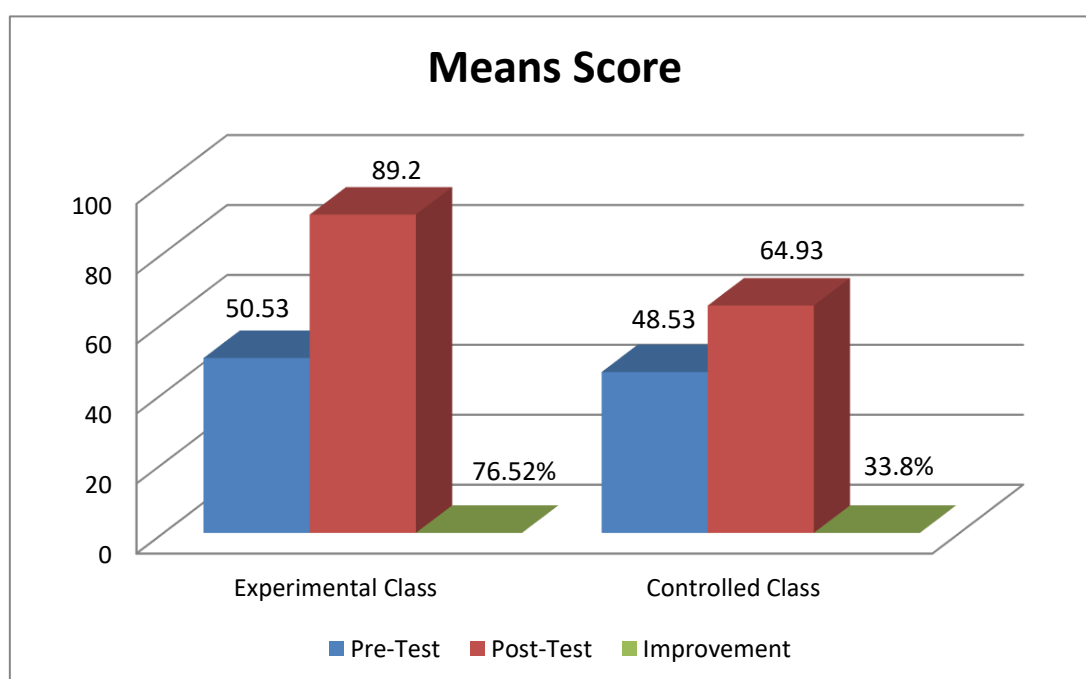
The table above also shows in experimental class (XI IPA 2) using Gamification Strategy, the results of pre-test was found that the means value was 50.53, which minimum score 20 and maximum score 88. Meanwhile, the means value of the post-test result is 89.20, with minimum score 80 and maximum score 100. Because all these numbers are large numbers, it is concluded that the distribution of data from the pre-test and post-test results of both classes is varied.

	N	Minimum	Maximum	Mean	Std. Deviation
Pre-Test Control Class	30	16	76	58.53	17.663

Post-Test Control Class	30	36	84	64.93	13.562
Valid N (listwise)	30				

The table above also shows that means score of pre-test score from control class (XI IPA 4) with using conventional method is 48.53, with minimum score 16 and maximum score 76. Meanwhile, the means score of post-test is 64.93, with minimum score 36 and maximum score 84.

The improvement of the students' reading comprehension both in pre-test and post-test in experimental and controlled class can be seen at the chart below:



From the chart above it is known that the students' reading comprehension means score of pre-test and post-test in experimental and controlled class has significant improvement from reading. The students' reading means score of pre-tests in experimental class was 50.53 and post-test was 89.2. The improvement of pre-test to the post-test was 76.52%. It means that the target to improve students reading comprehension with Gamification has been reached. Meanwhile, the improvement percentage of students' score in controlled class is 33.8%. It means that the students' reading through Conventional Method has a less improvement.

The effect of the strategy was proven by the gap analysis of the means scores on the post-test between the experimental class and the controlled class. The experimental class's average score was 89.20, while the controlled class was 64.93. This indicates there is a 24.27 points difference in the scores between the experimental class and the controlled class. Based on

the explanation of the difference between the two classes, the result of the experimental class shows a greater score than the controlled class.

The paired sample T-Test calculation results using SPSS 24 also show that the t-test value was 16.149, with a probability (Sig.) of 0.000. the probability (Sig.) is  $0.000 < 0.05$  which indicates that there is a significant difference between the students' reading comprehension in terms of literal comprehension (main idea) and interpretative comprehension (understanding vocabulary) in the experimental class after the implementation of gamification compared to the controlled class using conventional method.

A significance (Sig.) of  $0.000 < 0.05$  was obtained by calculating the Independent Sample T-Test using SPSS 24. This indicates that the learning results in the experimental class and the controlled class are significantly different. It is clear from the results obtained that students' that used Gamification (Quizizz Application) has significantly different learning outcomes. In this research, using the Gamification to teach students English Reading Comprehension has greater than using Conventional Method.

The last of data analysis, which after getting statistical data, the researcher tried to analyze the effect size of the research. It is aimed to know the level significance of the study and to show precisely how large the effects of the data are. The result of effect size formulation in this research is 2.3. As the criteria that have been presented by Cohen above, 2.3 represents a strong effect size. Thus, it proves that there is a strong effect of using Gamification on students' English learning especially in reading comprehension.

The use of Gamification is a tool that helps students learn English with enthusiasm and shows an increase in both motivation and student achievement Kotob & Ibrahim, (2019). In addition, Laksanasut & Seubsang, (2021) state that the use of gamification with game elements (such as rules, competitions, point systems, and rewards) effectively increases students' motivation to learn English. Thus, based on previous findings, this research finds the same statement that using gamification strategies with game elements (such as challenges, rewards, points, and leaderboards) makes students feel motivated and interested in learning. Students are faced with a fun, interesting, and challenging learning environment during learning so as to improve student's reading comprehension in English.

## CONCLUSION

Based on the researcher findings and discussion in the previous chapter and looking at the result of the research, the researcher made a conclusion as follows

1. The Gamification strategy using the Quizizz application is effective in improving students' reading comprehension with an average post-test score of 89.20. This is in line with Sari, Akbarjono, & Martina, (2022) the use of gamification effectively increases students' literal reading comprehension.

2. The result of using Conventional Method was less effective to increase students' English learning especially in reading comprehension with the means score of post-tests was 64.93.
3. There are significant differences between using Gamification and conventional method in students' reading comprehension. Gamification was effective than using Conventional Method in English learning especially students' reading comprehension. The statistical hypothesis produces p-value or sig (2-tailed) = 0.000 while alpha ( $\alpha$ ) is 0.05 (5%). In short,  $p < \alpha$  ( $0.000 < 0.05$ ), it shows the null hypothesis is rejected and alternative hypothesis is accepted is accepted. From the calculation of the effect size which refers to Cohen's d formula which to know the extent of the effectiveness of the strategy, it is found that the effect size of the study was 2.3. It can be inferred that the level effect ranged is at a strong level. In conclusion, the research had proved that Gamification was strongly effective on improving students' reading comprehension at the 11th grade of SMA Negeri 5 Takalar.

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